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NOTES FROM THE MEDICAL PRESS

IN CHARGE OF

ELIZABETH ROBINSON SCOVIL



THE EFFECTS OF PRESERVATIVES ON HEALTH AND DIGESTION.—Dr. W. H. Wiley, chief of the Bureau of Chemistry in the United States Department of Agriculture, delivered at Philadelphia on November 4, under the auspices of the Franklin Institute, a lecture entitled “The Results of Experimental Studies of the Effects of Preservatives on Health and Digestion.” He pointed out that various methods of preserving food have been practised since earliest times. Among such methods are the removal of water and the use of certain condimental substances, such as salt, sugar, vinegar, and wood-smoke. More recently sterilization of food by heat and the exclusion of germs has been practised and constitutes one of the safest and most approved methods of preservation. Still more recently a system of food preservation has grown up based on the use of so-called antiseptics which have the power of inhibiting or destroying the germs of putrefaction. The more common of these are boric acid, borax, salicylic acid, benzoic acid, sulphurous acid, and formaldehyde. There is a wide difference of opinion among physiologists and chemists as to the effects of such substances. In order to clear up the matter a series of experimental observations were made for a period of nine months under the auspices of the Department of Agriculture, borax and boric acid being added to food, beginning with small amounts (nine and one-half grains) and gradually increasing them to from forty-five to sixty grains daily. It was found that the maximum amounts caused disturbance of digestion and derangement of health, as manifested by impairment of appetite, loss of weight, a feeling of uneasiness and sometimes of pain in the stomach, a sense of fulness in the head, often developing into a dull and persistent headache, a general disturbance of the metabolic activities of the digestive organs, and other unpleasant symptoms. When the small amounts were employed for a long time similar symptoms developed, though in lesser degree. It may therefore be concluded that while the injection of small amounts of borax occasionally with the food would do no permanent injury to an ordinary healthy individual, it might prove distinctly hurtful under the reverse conditions. Corresponding observations have been made with salicylic acid, benzoic acid, and sulphurous

acid, but the results are not yet ready for publication, and studies upon the effects of formaldehyde and various coloring matters on health and digestion are to be made.—*Medical Record*.

A NEW TYPHOID-FEVER SERUM.—At the French Medical Congress, held in Paris the latter part of October, Professor Chantemesse read a paper giving an account of the results obtained by a new antiserum in the treatment of typhoid fever. The serum is prepared by injecting soluble typhoid toxin into the horse, according to a method described by the author in a paper read at the International Congress of Hygiene in Madrid in 1898. He has been using this serum in his service at the Hôpital du Bastion 29 for three years and a half, treating in that period five hundred and forty-five cases with only twenty-two deaths, showing the remarkably low mortality (for Paris hospital cases) of four per cent. During the same period there were treated by the usual methods in fourteen of the Paris hospitals three thousand one hundred and ninety-nine cases, with five hundred and eighty-one deaths, showing a mortality of practically eighteen per cent. As to the mode of action of this serum, Chantemesse says it exerts a rapid and energetic specific effect upon the defensive apparatus of the organism—the spleen, the lymphoid tissue, and the bone marrow. The stimulation which it produces is the greater and more effective the earlier in the course of the disease it is used. The organism must be still capable of reaction, and if the nervous system is already profoundly depressed, the benefit of serum medication is much less evident. Its mode of employment is very different from that of diphtheria antitoxin. In the case of diphtheria, the more severe the disease the stronger should be the dose of antitoxin; but the reverse is true, Chantemesse says, in the case of the typhoid serum which he employs, for the more profoundly the patient is affected the weaker must be the dose of serum.

THE MECHANICAL STERILIZATION OF RUBBER GLOVES.—Fromme and Gawrensky have made a series of bacteriological tests with a view to determining whether it was possible to render completely sterile by purely mechanical means rubber gloves that have been infected. Dettmer, Wandel, and Höhne published results indicating that this could be effected by washing with soap and sterile water for two and a half minutes, but the authors found that it was impossible to insure sterility in this way. They always observed growths in the culture medium unless the washing process was concluded with the use of an antiseptic solution (1 to 1000 bichloride). They explain this discrepancy by attributing the results of

former authors to the fact that they used as nutrient medium agar, which is less adapted for the growth of the germs concerned than is bouillon, which was the culture-medium employed by themselves. Their conclusion is that it is safe to perform minor operations with rubber gloves that are put on in unsterile condition and then washed for four minutes with soap and water and for two minutes longer with bichloride solution. It is, of course, essential that the glove be without holes and that it fit well.—*Medical Record*.

THE THROAT AS THE SOURCE OF SYSTEMIC INFECTION IN ACUTE RHEUMATISM.—P. Watson Williams presents a few brief conclusions on this subject: Acute rheumatism is an infective disease *sui generis*. There is a true rheumatic pharyngitis or tonsillitis, and it is a primary infection. Rheumatic fever is a secondary infection, due either to the absorption of the products of the infective micro-organisms or to the growth of such micro-organisms in the tissues, and the infection may manifest itself in arthritis, pericarditis, endocarditis, chorea, bronchitis, pleurisy, alone or in association. In a large percentage of cases the portal of infection is in the fauces or pharynx or other region of the upper respiratory tract, but most often in the oropharyngeal lymphoid ring. There is no proportion between the intensity of the primary local lesion and the appearance or severity of the secondary systemic complications.—*The Bristol Medico-Chirurgical Journal*.

COLD BATHS IN NEURASTHENIA.—Alessi praises the effects of cold baths in neurasthenic patients. He attributes the good results obtained with this treatment to the fact that in most cases neurasthenia depends on the presence of the uric-acid diathesis or of rheumatism or gout, and that the increased metabolism produced by these baths is of great benefit. There is also a certain amount of psychical effect which is very beneficial in these patients, and after a time they are able to resume their ordinary occupations with more energy, and suffer less from their nervous condition.

ALCOHOL FLAME AS A MEANS OF STERILIZATION.—Gottignies found the flame of alcohol, as employed by many surgeons, to be insufficient to destroy germs. He was unable to destroy in a two-minute exposure cultures of staphylococcus, streptococcus, bacillus of Eberth, and anthrax. They were, however, destroyed by an exposure of three and a half to four minutes. Instruments placed directly in the flame are sterilized in a half minute, but the effect upon the instruments is deleterious.